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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,315	01/11/2002	Christine C. Dykstra	421/60/18/2	6772

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EXAMINER

STOCKTON, LAURA

ART UNIT PAPER NUMBER

1626

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/044,315	<b>Applicant(s)</b> DYKSTRA ET AL.	
	<b>Examiner</b> Laura L. Stockton, Ph.D.	<b>Art Unit</b> 1626	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-106 is/are pending in the application.
- 4a) Of the above claim(s) 1-33,36-39,41,42,49 and 53-106 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34,35,40, 43-48 and 50-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>10/21/02</u> | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

Claims 1-106 are pending in the application.

### *Election/Restrictions*

Applicants' election of Group III, and the species of DB673 (Table I on page 8 of the specification), in the response filed August 18, 2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The generic concept which has been examined (inclusive of the elected species of DB673) is as follows:

Compounds of formula (VI) wherein

$X_1$  is O;

$X_2$  is CH; and

A is the last four nitrogen containing substituents listed {e.g.,  
 $-C(=NH)NHR_6$ ,  $-NH-C(=NH)NHR_6$ , etc.}.

The generic concept is embraced by claims 34, 35, 40, 43-48 and 50-52.

The requirement is still deemed proper and is therefore made FINAL.

Subject matter not embraced by the above identified generic concept and claims 1-33, 36-39, 41, 42, 49 and 53-106 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions. Election was made **without** traverse in the response filed August 18, 2003.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 34, 35 and 50-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 34, under the definition of A, there is a valence problem in the imidazoline substituent (e.g., see the single bonded nitrogen). In claim 35, the phrase "X<sub>2</sub> is C" should be changed to "X<sub>2</sub> is CH".

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 34, 35, 40, 44, 46-48 and 50-52 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and 11-14 of copending Application No. 10/008,535 and claims 30 and 31 of copending Application No. 09/985,590. Although the conflicting claims are not identical, they are not patentably distinct from each other because the difference between the instant claimed invention and the inventions claimed in 10/008,535 and 09/985,590 {U.S. Patent Application Publication 2002/0156098} is that the instant claimed invention is generically described in each of these applications. See, for example, instant claim 40 and claim 7 in 10/008,535 and compounds in

paragraphs [0029], [0030], etc. on page 2 and page 15, column 1 of the U.S. Patent Application Publication 2002/0156098.

The indiscriminate selection of “some” among “many” is *prima facie* obvious, *In re Lemin*, 141 USPQ 814 (1964). The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (e.g., treating microbial infections).

One skilled in the art would thus be motivated to prepare compounds embraced by the prior art to arrive at the instant claimed compounds with the expectation of obtaining additional beneficial compounds which would be useful in treating, for example, microbial infections. The instant claimed invention would have been suggested to one skilled in the art and therefore, the instant claimed invention would have been obvious to one skilled in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 34 and 35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 19 of U.S. Patent No. 5,602,172 and claims 1-10 of U.S. Pat. 6,008,247. Although the conflicting claims are not identical, they are not patentably distinct from each other because the difference between the instant claimed invention and the inventions claimed in the patents is that the instant claimed invention is generically described in each of these patents. See, for example, instant claim 34 and claim 19 in U.S. Pat. 5,602,172 and the first compound in claim 9 of U.S. Pat. 6,008,247.

The indiscriminate selection of “some” among “many” is *prima facie* obvious, *In re Lemin*, 141 USPQ 814 (1964). The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (e.g., treating *Pneumocystis carinii* pneumonia).

One skilled in the art would thus be motivated to prepare compounds embraced by the prior art to arrive at the instant claimed compounds with the expectation of obtaining additional beneficial



compounds which would be useful in treating, for example, *Pneumocystis carinii* pneumonia. The instant claimed invention would have been suggested to one skilled in the art and therefore, the instant claimed invention would have been obvious to one skilled in the art.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 34 and 35 are rejected under 35 U.S.C. 102(a) as being anticipated by Davis et al. {CA 134:39002, 2000}.

Davis et al. disclose the compound of CA Registry No. 313070-55-2 which is embraced by the instant claimed invention.

Claims 34, 35 and 50-52 are rejected under 35 U.S.C. 102(b) as being anticipated by:

- a) Boykin et al. {U.S. Pat. 6,008,247} – see, for example, compound 1 in column 8;
- b) Del Poeta et al. {Antimicrobial Agents and Chemotherapy (1998), 42(10), pages 2503-2510} – see, for example, compound 16 in Table 2 on page 2505;
- c) Blagburn et al. {CA 129:297986, 1998} – see, for example, the compound of CA Registry 73819-26-8;
- d) Boykin et al. {Journal of Medicinal Chemistry (1998), 41(1),

pages 124-129} – see, for example, compounds 1, 2, 3,  
etc. in Table 1 on page 126;

- e) Neidle et al. {CA 127:103988, 1997} – see, for example, the  
compound of CA Registry No. 173420-56-9;
- f) Wuonola et al. {U.S. Pat. 5,668,165} – see, for example,  
Example 15 in column 20;
- g) Boykin et al. {U.S. Pat. 5,602,172} – see, for example,  
compound 1 in column 18;
- h) Dykstra et al. {U.S. Pat. 5,723,288} – see, for example,  
Example 3 in column 12;
- i) Boykin et al. {CA 122:230122, 1995} – see, for example, the  
compound of CA Registry No. 61829-76-3;
- j) Steck et al. {CA 96:135352, 1982} – see, for example, the  
compound of CA Registry No. 80498-71-1; and
- k) Das et al. {Journal of Medicinal Chemistry (1977), 20(4),  
pages 531-536} – see, for example, compound 4 in  
Table 1 on page 533.

Each of the above cited prior art disclose at least one compound which is embraced by the instant claimed invention.

Claims 34, 35, 43-45, 47, 48 and 50-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Werbovetz et al. {U.S. Patent Application Publication 2002/0156098}.

Werbovetz et al. disclose compounds embraced by the instant claims. See, for example, compounds in paragraphs [0029], [0030], etc. on page 2 and page 15, column 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 34, 35, 40, 43-48 and 50-52 are provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application Nos. 10/008,535 and 09/985,590 which have a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e) if published or patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future publication or patenting of the conflicting application.

The instant claimed invention is directed to furan products. The invention in 10/008,535 is directed to furan compounds and the invention in 09/985,590 is directed to compositions. The difference between the instant claimed invention and the invention claimed in the two applications is that the instant claimed invention is generically described in these.

The indiscriminate selection of “some” among “many” is *prima facie* obvious, *In re Lemin*, 141 USPQ 814 (1964). The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (e.g., treating microbial infections).

One skilled in the art would thus be motivated to prepare compounds embraced by the prior art to arrive at the instant claimed compounds with the expectation of obtaining additional beneficial compounds which would be useful in treating, for example, microbial infections. The instant claimed invention would have been suggested to one skilled in the art and therefore, the instant claimed invention would have been obvious to one skilled in the art.

This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention “by another,” or by a showing of a date of

invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131. For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Claims 34, 35, 40, 43-48 and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werbovetz et al. {U.S. Patent Application Publication 2002/0156098}, Boykin et al. {U.S. Pat. 6,008,247}, Wuonola et al. {U.S. Pat. 5,668,165}, Boykin et al. {U.S. Pat. 5,602,172}, Dykstra et al. {U.S. Pat. 5,723,288} and Boykin et al. {U.S. Patent Application Publication 2003/0083362 – publication of Application No. 10/008,535}, each taken alone or in combination with each other when similar utilities are asserted.

*Determination of the scope and content of the prior art (MPEP §2141.01)*

Applicants claim furan compounds. Werbovetz et al. (page 2 and page 15), Boykin et al. '247 (column 1, lines 5-49; column 3, lines 5-38; and especially, compound 1 in column 8), Wuonola et al. (compound 2; column 8; and especially Example 15 in column 20), Boykin et al. '172 (columns 2 and 4; and especially compound 1 in column 18), Dykstra et al. (column 4; and especially, Example 3 in column 12) and Boykin et al. '362 (pages 2-4; and especially compound 5a on page 3) each teach furan compounds which are structurally the same as (see above 102 rejections) or structurally similar to the instant claimed compounds.

*Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)*

The difference between some of the compounds of the prior art and the compounds instantly claimed is that the instant claimed compounds are generically described in the prior art.



*Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)*

The indiscriminate selection of “some” among “many” is *prima facie* obvious, *In re Lemin*, 141 USPQ 814 (1964). The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (e.g., treating microbial infections or *Pneumocystis carinii* pneumonia).

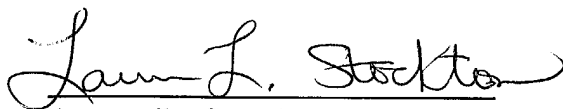
One skilled in the art would thus be motivated to prepare compounds embraced by the prior art to arrive at the instant claimed compounds with the expectation of obtaining additional beneficial compounds which would be useful in treating, for example, microbial infections or *Pneumocystis carinii* pneumonia. The instant claimed invention would have been suggested to one skilled in the art and therefore, the instant claimed invention would have been obvious to one skilled in the art.

The elected species of DB673 is not allowable (see U.S. Patent Application Publication 2002/0156098).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura L. Stockton whose telephone number is (703) 308-1875. The examiner can normally be reached on Monday-Friday from 6:00 am to 2:30 pm. If the examiner is out of the Office, the examiner's supervisor, Joseph McKane, can be reached on (703) 308-4537.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1235.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

A handwritten signature in cursive script that reads "Laura L. Stockton". The signature is written in dark ink and is positioned above the printed name and title.

Laura L. Stockton, Ph.D.  
Patent Examiner  
Art Unit 1626, Group 1620  
Technology Center 1600

September 3, 2003